



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,407	07/01/2003	Ayae Endo	9319S-000521	1885
27572	7590	12/01/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			COLON, GERMAN	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			2879	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

✓

Office Action Summary	Application No. 10/611,407	Applicant(s) ENDO ET AL.	
	Examiner German Colón	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/25/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The Amendment, filed on September 13, 2005, has been entered and acknowledged by the Examiner.
2. Cancellation of claims 1-22 has been entered.

Information Disclosure Statement

3. The IDS filed 8/25/05 was partially considered. Korean Patent 2001-0062574 lacks a translation or at least an abstract stating the relevance of the document. Also, the IDS fails to provide a translation of the Communication from the Korean Patent Office and the relevance of the document cannot be ascertain.

Claim Rejections - 35 USC § 112

4. Claims 25-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 25 recites the limitation "one material layer of *the* plurality of material layers" in line 3. There is insufficient antecedent basis for this limitation in the claim. The Examiner notes that the claim as originally filed recited the EL device having a plurality of material layers, however, after the amendment, it now recites a plurality of metal layers.

Claim 26 is rejected over the reasons stated above because of its dependency status from claim 25.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (US 2001/0001050) in view of Cao (US 5,965,281).

Regarding claims 23, 25 and 27, Miyashita discloses an organic EL device and a method of manufacturing the same, the EL device having functional elements selectively applied on an applying position surrounded by a partition wall **105** (see at least Figs. 1-5), comprising the steps of:

including a liquid material containing a functional element constituting material and a solvent; and

sending the composition to liquid material ejecting means **109** through a passage **110**, and applying the composition on the applying position surrounded by the partition wall on the base substrate with the liquid material injecting means, thereby forming a film which will become components of the functional element. Miyashita is silent regarding the limitation of the liquid material further comprising a surfactant.

However, in the same field of endeavor, Cao discloses an organic EL device having functional elements and teaches to dissolve or disperse a surfactant on a functional element constituting material (see Col. 3, lines 40-41) with the purpose of improving electron injection

Art Unit: 2879

into the functional element, while increasing environmental stability and external quantum efficiency, yet operating at low voltages (see at least Col. 3, lines 45-49 and 53-55). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a surfactant to the liquid material of Miyashita, in order to improve electron injection into the functional element, while increasing environmental stability and external quantum efficiency, yet operating at low voltages.

Regarding claim 24, Miyashita-Cao discloses the functional element being organic EL elements (see '050, paragraph [0041], lines 9-10; and '281, Col. 4, lines 1-10).

Regarding claim 26, Miyashita-Cao discloses a light emitting layer containing the surfactant (see '281, Col. 3, lines 40-42; and Col. 4, lines 1-10).

Referring to claim 28, Miyashita discloses the material layers being formed by ejecting liquid material containing the composition with a liquid material injection device 109.

Referring to claim 29, Miyashita-Cao discloses the claimed invention but is silent regarding the limitation of the surfactant being transparent or semitransparent. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a transparent surfactant in order to avoid the surfactant to absorb or block the light emitted by the functional material, which would reduce the light output. Providing a transparent surfactant allows efficient light extraction.

Referring to claim 30, Miyashita-Cao discloses a hydrophilic-lipophilic balance of the surfactant being in a range from 1 to 20 (see '281, and respective surfactant disclosed).

Art Unit: 2879

Response to Arguments

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

The submission of a verified translation of the foreign priority documents overcomes the rejection in view of Imamura.

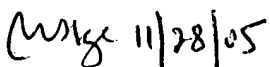
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 571-272-2451. The examiner can normally be reached on Monday thru Thursday, from 8:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


gc


MARICELI SANTIAGO
PRIMARY EXAMINER